

ARIZONA MINING AND MINERAL MUSEUM
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Scout Activity Sheet

Rocks are made of minerals. A mineral is a naturally occurring, inorganic, crystalline solid, with a definite chemical composition or range of compositions and characteristic physical properties. We use physical properties of minerals to identify them. Some physical properties are color, crystal form, luster, streak, fracture, cleavage, specific gravity, elasticity, malleability, and hardness.

Color-most minerals can exhibit a wide range of colors, but for a very few minerals color can be a helpful clue.

Crystal form-a mineral's outward expression of its internal atomic structure.

Luster-is how a mineral reflects light and can be described as metallic or non-metallic.

Streak-is the color of the powder of a mineral.

Fracture-the tendency of a mineral to break randomly and irregularly.

Cleavage-is when a mineral breaks along fixed, smooth, flat, repeatable surfaces.

Specific gravity-is a measure of a mineral's heft or density.

Elasticity-describes minerals that can be bent without breaking and that will return to their unbent condition.

Malleability-a mineral's ability to deform.

Hardness-a mineral's ability to resist scratching.

Answers: apatite, baby powder, battery, boron, calcite, calcium, chalk, chloride, colmanite, corundum, diamond, eraser, eye shadow, feldspar, fish, fluorite, gypsum, hematite, horse, iron, kermite, lava, lead, lip-gloss, luster, muscovite, orthoclase, pumice, quartz, salt, sodium, sulfate, talc, teeth, toothpaste, topaz, tungsten, tungstite, ulexite, zinc oxide, zinc, zincite.

Moh's Hardness Scale / Case 50

- _____ 6. _____
- _____ 7. _____
- _____ 8. _____
- _____ 9. _____
- _____ 10. _____

Products/Minerals/Elements Match Cases 20 & 21

The saw blade, distributor point, and light bulb, contain the element t_____ which is in the minerals scheelite, wolframite and t_____.

The minerals vanadinite, galena, cerussite & wulfenite contain the element l_____ and it is used in a light bulb, weights, glass candle stick and a b_____.

The red brick, brown glass mug, steel screws and spring, red blush, fresh pack and I_____ box all contain the element i_____ which is also in the minerals goethite, magnetite, pyrite, siderite and h_____.

The minerals smithsonite, hemimorphite, sphalerite and z_____ contain the element z_____ and it is used in gutters, brass valves and screws, a compact fluorescent bulb and a tube of A&D ointment containing z_____ o_____.

The mineral fluorite is a c_____ fluoride and is used in iridescent glass, stainless steel spoons, carving of a f_____, an enamel cup and in t_____.

The mineral orthoclase is a f_____ and is used in a plate, tiles and porcelain t_____.

The mineral calcite is a c_____ carbonate and is used in paint, medicines, glass and white c_____.

The mineral m_____ (a mica) is used in coated paper, a fuse, tube of paint, eye shadow and l_____.

The mineral talc is used in paint, aspirin, shoe whitener, deodorant, b_____ p_____ and e_____ s_____.

The mineral gypsum is a c_____ s_____ hydrate and is used in wallboard, plaster cast of a shell and a carving of a h_____.

The mineral halite is a s_____ c_____ and is a mineral we eat as s_____.

The volcanic rock p_____ is used in tile & concrete cleaner, L_____, soap, a pink e_____, and is used to make a stone washed denim hat.

The element b_____ is in the minerals tinalconite, k_____, u_____, and c_____.

Rock Cycle Exhibit & Volcano Model

Please visit the Rock Cycle Exhibit for a hands on study of the different types of rocks. Also, see the inner workings of a volcano at the Volcano model. Coming soon, see a Plate Tectonics model.

ENJOY YOUR VISIT!

